

Uvrstitev Univerze v Mariboru v mednarodnem sistemu razvrščanja Webometrics 2021 (verzija 2.0)

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1. Webometrics

Raziskovalna skupina **Cybernetics Lab** iz Španije dvakrat na leto objavi podatke o razvrščanju visokošolskih institucij - **Webometrics Ranking of World Universities**. V ocenjevanje je vključeno več kot **31.000** visokošolskih ustanov iz več kot 200 držav sveta. Webometrics je mednarodna lestvica, ki presoja kakovost visokošolskih institucij na osnovni podatkov, ki jih univerze objavijo na spletnih straneh.

Webometrics ugotavlja uspešnost delovanja visokošolskih institucij glede na njihovo vključenost v spletni prostor, ugled institucij, akademsko delovanje, vrednost informacij in sposobnost prenosa novo ustvarjenega znanja na družbo. V letu 2021 je prišlo do **metodoloških sprememb** pri ocenjevanju univerz (priloga Web-1), saj Webometrics ne uporablja več kazalnika **Presence**.

Pri drugem ocenjevanju v letu 2021 je Univerza v Mariboru uvrščena na **1.078** mesto. V primerjavi z lanskim letom je položaj izboljšala za **40** mesti. Od treh kazalnikov je UM napredovala pri najpomembnejšem kazalniku **Impact** (prinese 50% ocene za uvrstitev na lestvici) za **365** mest. Od leta 2015, ko je bila pri kazalniku Impact uvrščena na 6.307 mesto, je UM pridobila **3.767** mest. UM je popravila uvrstitev tudi pri kazalniku **Excellence** za 12 mest. Vrednost kazalnika **Openness** pa se je poslabšala za 14 mest.

Year	National Rank	World Rank	Presence Rank (0%)	lmpact (Visibility) Rank (50%)	Openness (Transparency) Rank (10%)	Excellence Rank (40%)
2016	2	1.156	260	3.735	1.139	838
2017	2	1.292	320	4.041	1.193	867
2018	2	1.169	41	3.499	1.466	906
2019	2	1.103	286	2.839	1.170	942
2020	2	1.118	276	2.905	1.038	1.023
2021	2	1.078	np	2.540	1.052	1.011
Diff.	0	+40	np	+365	-14	+12

Tabela Web-1: Vrednosti posameznih kazalnikov UM v letih 2016 – 2021

Vir: http://www.webometrics.info/en (http://www.webometrics.info/en/Europe/Slovenia%20) Universities: July 2021 Edition 2021.2.0 beta

V nadaljevanju so prikazane uvrstitve najboljših dvajsetih visokošolskih institucij v Sloveniji. Univerza v Mariboru je ohranila položaj iz zadnjih šestih let in je druga.

Tabela Web-2: Uvrstitve slovenskih univerz v juliju 2021

Slovenia

ranking	<u>World</u> <u>Rank</u> ▲	<u>University</u>	<u>Det.</u>	<u>Impact</u> <u>Rank*</u>	<u>Openness</u> <u>Rank*</u>	Excellence Rank*
1	327	<u>University of Ljubljana / Univerza v Ljubljani</u>	- 35	385	489	344
2	1078	<u>University of Maribor / Univerza v Mariboru</u>	- 15	2540	1052	1011
3	2088	<u>University of Primorska / Univerza na</u> Primorskem	38	4464	2257	2264
4	2799	<u>University of Nova Gorica / Univerza v Novi</u> <u>Gorici</u>		6355	4388	2293
5	5254	<u>Jožef Stefan International Postgraduate School</u> Ljubljana / Mednarodna podiplomska šola Jožefa Stefana	- 25-	17436	6488	2485
6	6274	<u>Faculty of Information Studies in Novo Mesto /</u> Fakulteta za informacijske študije	- 15-	16692	6488	4187
7	11845	Bled School of Management	- 35	9611	6488	6650
8	11845	<u>Faculty of Management Koper / Fakulteta za</u> management Koper	- 18-	9611	6488	6650
9	12132	<u>Euro-Mediterranean University Portorož</u>	- 35	9957	6488	6650
10	14063	<u>Alma Mater Europaea (European Study Center</u> <u>Maribor / Visokošolski zavod ESM)</u>	- 15-	12457	6488	6650
11	14474	<u>School of Advanced Social Studies in Nova</u> <u>Gorica / Fakulteta za uporabne družbene</u> <u>študije</u>	- 10	16610	6488	6216
12	14853	DOBA		13462	6488	6650
13	15147	GEA College of Entrepreneurship Piran	- 15	13842	6488	6650
14	16093	International School for Social and Business Studies Celje / Mednarodna fakulteta za družbene in poslovne študije Celje		14969	6488	6650
15	16473	Faculty of Tourism Studies Portorož Turistica	- 35	15445	6488	6650
16	17263	Faculty of Organisation Studies in Novo Mesto / Fakulteta za organizacijske študije v Novem mestu	- 35-	16368	6488	6650
17	17531	New University / Nova Univerza	- 35-	16692	6488	6650
18	18442	Academia		17736	6488	6650
19	18537	Faculty of Health Care Angele Boskin / Fakulteta za zdravstvo Angele Boškin	16	17851	6488	6650
20	18698	Faculty of Commercial and Business Sciences Celje / Fakultete za komercialne in poslovne vede Celje		18038	6488	6650

Vir: http://webometrics.info/en/Europe/Slovenia%20

Universities: July 2021

Edition 2021.2.0 beta

Webometrics od decembra 2015 uporablja za oceno kazalnika OPENNESS podatke o citatih znanstvenikov za obdobje petih let (**letos od 2015 do 2019**), ki so zaposleni na visokošolski instituciji in si z njo delijo standardizirano ime in e-poštni naslov, kot je zapisan v njihovem **Google Scholar Citations** profilu. Oblikovanje osebnih in institucionalnih profilov v bazi Google Scholar je prostovoljno. Ko pa je profil javno dostopen, so institucije in posamezniki odgovorni za pravilnost objavljenih podatkov. Zato morajo znanstveniki svoje profile redno vzdrževati in izločati napačne ali podvojene zapise.

Kako zelo se je razširila uporaba Google Scholar profilov med znanstveniki je prikazano v podatkih o številu citatov najboljših svetovnih univerzah in univerz iz našega regionalnega in mednarodnega okolja. Podatki so povzeti po spletni strani **Webometrics TRANSPARENT RANKING**: Top Universities by Citations in **Top Google Scholar profiles**, kjer je prikazano število citatov za okrog **4.200 univerz** (priloga Web-3) za leto 2020.

			CITATIONS 2016 - 2021								
UNIVERSITY		2016	2017	2018	2019	2020	2021	Diff. 201	.6 - 2021		
Howevel University	Citations	1.389.765	1.734.533	1.699.962	8.704.969	14.371.683	16.121.032	14.731.267	1160%		
Harvard University	Rank	1	1	1	1	1	1		0		
Stanford University	Citations	1.044.631	1.197.114	1.361.704	7.702.739	11.935.550	13.846.133	12.801.502	1325%		
	Rank	2	2	2	2	2	2		0		
Johns Hopkins	Citations	1.021.937	1.152.185	720.389	2.669.136	3.883.781	4.357.102	3.335.165	426%		
University	Rank	3	3	29	44	33	35		-32		
University of California	Citations	967.389	1.106.930	1.260.364	6.431.594	<mark>8.679.931</mark>	9.531.440	8.564.051	985%		
Berkeley	Rank	4	4	3	3	3	3		1		
University of Chieses	Citations	902.966	958.122	1.006.555	3.485.019	4.608.113	5.233.213	4.330.247	580%		
University of Chicago	Rank	5	6	12	19	23	23		-18		
Citation Sum:		5.326.688	6.148.884	6.048.974	28.993.457	43.479.058	49.088.920	43.762.232	922%		

Tabela Web-3: Univerze z največ citati v letih 2016 do 2020



Vir: http://www.webometrics.info/en/transparent

Razlog za veliko prevlado univerz iz ZDA v številu citatov je število vrhunskih znanstvenikov, ki delajo na ameriških univerzah. Družba Clarivate Analytics (Web of Science) vsako leto objavi seznam raziskovalcev, ki so se uvrstili v 1% najboj citiranih znanstvenikov. Na seznamu Highly Cited Researchers za leto 2020 je zbranih 6.389 raziskovalcev iz skoraj 60 držav. Od tega jih v ZDA dela 2.650, kar predstavlja 41,5% raziskovalcev. Na drugo mesto je uvrščena Kitajska s 770 raziskovalci, ki predstavljajo 12,2% vseh uvrščenih. Na trejem mestu je Združeno kraljestvo s 514 raziskovalci. Podatki Clarivate Analyticsa nam tudi prikažejo kako enostranska je porazdelitev najboljših znanstvenikov, saj jih 84,1% prihaja iz samo desetih držav, 71,7% pa prvih pet (tabela HCR-1).

V zadnjih treh letih je Kitajska povečevala število (za 288) in delež (na 12,1%) visoko citiranih raziskovalcev. Države, ki se jim je zmanjševalo število ali delež najboljših raziskovalcev, pa so ZDA, Združeno kraljestvo in Nemčija.

Med uspešnimi državami je tudi Avstralija, saj je v sedmih letih več kot potrojila število najbolj citiranih raziskovalcev (od 80 v letu 2014 do 305 v letu 2020). Avstralske raziskovalne institucije so »uvozile« veliko število visoko citiranih raziskovalcev, del povečanja pa je posledica vlaganj v razvoj domačih raziskovalcev.

Rank	Country/region	Number of Highly Cited Researchers	Percent of Highly Cited Researchers
1	United States	2650	41.5
2	China Mainland	770	12.1
3	United Kingdom	514	8.0
4	Germany	345	5.4
5	Australia	305	4.8
6	Canada	195	3.1
7	The Netherlands	181	2.8
8	France	160	2.5
9	Switzerland	154	2.4
10	Spain	103	1.6

Tabela HCR-1: Države po številu najbolj citiranih znanstvenikov v letu 2020

Vir: https://clarivate.com/news/

Na seznamu za leto 2020 je 26 prejemnikov Nobelove nagrade in trije kandidati za Nobelovo nagrado. Med visoko citiranih raziskovalcev je tudi 77 nagrajencev za citiranje (Web of Science Group) - to so posamezniki, ki so potencialni prejemniki Nobelove nagrade.

Tabela HCR-2: Nobelovi nagrajenci na seznamu najbolj citiranih znanstvenikov v letu 2020

No.	Name	Category and year					
1	James P. Allison	Physiology or Medicine 2018					
2	David Baltimore	Physiology or Medicine 1975					
3	Emmanuelle Charpentier	Chemistry 2020					
4	Jennifer A. Doudna	Chemistry 2020					
5	Esther Duflo	Economics 2019					
6	Eugene Fama	Economics 2013					
7	Ben L. Feringa	Chemistry 2016					
8	Albert Fert	Physics 2007					

9	Andre K. Geim	Physics 2010
10	Reinhard Genzel	Physics 2020
11	John B. Goodenough	Chemistry 2019
12	Theodor W. Hänsch	Physics 2005
13	James J. Heckman	Economics 2000
14	Alan J. Heeger	Chemistry 2000
15	Brian K. Kobilka	Chemistry 2012
16	Robert J. Lefkowitz	Chemistry 2012
17	Edvard I. Moser	Physiology or Medicine 2014
18	May-Britt Moser	Physiology or Medicine 2014
19	Konstantin Novoselov	Physics 2010
20	Gregg L. Semenza	Physiology or Medicine 2019
21	Phillip A. Sharp	Physiology or Medicine 1993
22	Fraser Stoddart	Chemistry 2016
23	Thomas C. Südhof	Physiology or Medicine 2013
24	Susumu Tonegawa	Physiology or Medicine 1987
25	⁺ Roger Y. Tsien	Physiology or Medicine 2008
26	Shinya Yamanaka	Physiology of Medicine 2012

Vir: Clarivate - Web of Science

Med inšttitucijami je na prvem mestu Univerza Harvard z 188 visoko citiranimi raziskovalci. Drugo veliko središče najboljših raziskovalcev je Kalifornija z univerzo Stanford (106), univerzami v Berkeleyju (62), San Diegu (56) ter Los Angelesu (40) (tabela HCR-3).

Institutions	Country/region	Number of researchers				
Institutions	Country/region	2018	2019	2020		
Harvard University	U.S.	186	203	188		
Chinese Academy of Sciences	China Mainland	99	101	124		
Stanford University	U.S.	100	103	106		
National Institutes of Health	U.S.	148	98	103		
Max Planck Society	Germany	76	73	70		
University of California Berkeley	U.S.	64	58	62		
Broad Institute	U.S.	44	60	61		
University of California San Diego	U.S.	47	54	56		
Tsinghua University	China Mainland	26	42	55		
Washington University of St Louis	U.S.	51	55	54		
Massachusetts Institute of Technology	U.S.	45	54	53		
University of Oxford	U.K.	59	44	52		
Memorial Sloan Kettering Cancer Center	U.S.	26	54	51		

Tabela HCR-3: Inštitucije po številu najbolj citiranih znanstvenikov v letu 2018 - 2020

Yale University	U.S.	31	51	50
University of California San Francisco	U.S.	28	36	46
University of Cambridge	U.K.	53	50	46
University of Pennsylvania	U.S.	44	39	46
Columbia University	U.S.	39	47	45
Johns Hopkins University	U.S.	41	45	42
Cornell University	U.S.	35	42	41
Swiss Institute of Bioinformatics	Switzerland	27	29	41
University College London	U.K.	41	40	41
King Abdulaziz University	Saudi Arabia	43	38	40
University of California Los Angeles	U.S.	47	52	40
University of North Carolina Chapel Hill	U.S.	34	37	40
Nanyang Technological University	Singapore	40	29	39
Duke University	U.S.	44	54	37
King Saud University	Saudi Arabia	29	23	36
Mayo Clinic	U.S.	32	35	36
University of Melbourne	Australia	33	34	36



					CITATIO	ONS 2016 - 20	21		
UNIVERSITY		2016	2017	2018	2019	2020	2021	Diff. 2016 - 2021	
Lund University	Citations	439.083	527.814	630.271	2.094.344	1.883.801	2.252.404	1.813.321	513%
Lund University	Rank	49	47	45	71	123	113		-64
University of	Citations	379.694	417.726	498.981	2.545.353	3.532.704	4.244.805	3.865.111	1118%
Manchester	Rank	69	76	79	47	44	38		31
University of Trieste	Citations	116.747	135.729	171.520	363.689	372.996	514.465	397.718	441%
	Rank	431	407	410	554	580	521		-90
Technische Universität	Citations	88.352	105.332	150.722	436.881	390.014	462.955	374.603	524%
Graz	Rank	548	520	469	486	566	569		-21
	Citations	69.009	96.281	139.019	403.634	381.702	541.153	472.144	784%
University of Marburg	Rank	666	575	507	519	576	503		163
Karl Franzens	Citations	40.623	57.390	91.295	320.873	320.321	459.204	418.581	1130%
Universität Graz	Rank	932	850	720	607	625	571		361
University of Marihan	Citations	28.350	33.833	30.494	95.383	104.393	132.644	104.294	468%
University of Maribor	Rank	1.146	1.181	1.491	1.182	1.056	1.055		91
Comenius University in Bratislava	Citations	26.659	32.856	43.556	147.580	148.058	191.308	164.649	718%
	Rank	1.188	1.194	1.201	938	915	890		298
Citation Sum:		1.188.517	1.406.961	1.755.858	6.407.737	7.133.989	8.798.938	7.610.421	740%

Tabela Web-4: Število citatov univerz, ki so bile vključene v poročilo o ZRD UM leta 2012



Vir: http://www.webometrics.info/en/transparent

UNIVERSITY		CITATIONS 2016 - 2021							
(Slovenia)		2016	2017	2018	2019	2020	2021	Diff. 201	.6 - 2021
I haite and the set the billion of	Citations	<mark>59.64</mark> 5	69.457	81.719	353.113	461.956	562.420	502.775	943%
Oniversity of Ljubijana	Rank	734	753	779	569	499	492		242
University of Nova Gorica	Citations	35.425	39.690	43.651	4.451	np	np	-30.974	13%
	Rank	1.012	1.084	1.197	3.734	np	np		-2.722
University of Marihar	Citations	28.350	33.833	30.494	95.383	104.393	132.644	104.294	468%
University of Maribor	Rank	1.146	1.181	1.491	1.182	1.056	1.055		91
University of Drimerska	Citations	5.153	8.635	13.107	11.906	11.702	17.681	12.528	343%
University of Primorska	Rank	2.386	2.407	2.349	2.811	2.310	2.269		117
Citation Sum:		128.573	151.615	168.971	464.853	578.051	712.745	584.172	554%

Tabela Web-5: Slovenske univerze z največ citati v letih 2016 do 2021



Vir: http://www.webometrics.info/en/transparent

* - zaradi spremembe metodologije se Univerza iz Nove Gorice od leta 2019 ni več uvrščala na seznam

UNIVERSITY		CITATIONS 2016 - 2021							
(Austria)		2016	2017	2018	2019	2020	2021	Diff. 201	.6 - 2021
Universität Wien	Citations	185.771	282.087	252.630	925.179	1.296.173	1.511.460	1.325.689	814%
	Rank	251	153	269	232	198	198		53
Universität Innsbruck	Citations	154.811	125.547	198.098	555.020	593.569	730.638	575.827	472%
	Rank	327	454	353	391	423	407		-80
Medizinische	Citations	122.292	174.062	218.456	794.223	906.986	1.136.355	1.014.063	929%
Universität Wien	Rank	411	320	318	274	297	268		143
Technische Universität	Citations	88.352	105.332	150.722	436.881	390.014	462.955	374.603	524%
Graz	Rank	548	520	469	486	566	569		-21
Karl Franzens	Citations	40.623	57.390	91.295	320.873	320.321	459.204	418.581	1130%
Universität Graz	Rank	932	850	720	607	625	571		361
Citation Sum:		591.849	744.418	911.201	3.032.176	3.507.063	4.300.612	3.708.763	727%

Tabela Web-6: Avstrijske univerze z največ citati v letih 2016 do 2021



Vir: http://www.webometrics.info/en/transparent

UNIVERSITY		CITATIONS 2016 - 2021							
(Croatia)		2016	2017	2018	2019	2020	2021	Diff. 201	.6 - 2021
11	Citations	34.702	90.492	3.248	19.981	22.035	52.682	17.980	152%
University of Zagreb	Rank	1.021	609	4.199	2.316	1.902	1.551		-530
University of Dilate	Citations	31.083	<mark>46.00</mark> 4	56. <mark>76</mark> 7	125.874	141. <mark>4</mark> 88	162.237	131.154	522%
University of Rijeka	Rank	1.097	990	1.010	1.025	931	962		135
University of Culit	Citations	15.358	68.242	85.821	97.659	77.715	97.958	82.600	<mark>638%</mark>
University of Split	Rank	1.543	764	754	1.166	1.211	1.215		328
University of Today	Citations	1.839	3.485	6.286	19.754	22.229	28.631	26.792	1557%
University of Zadar	Rank	3.160	3.485	3.298	2.329	1.898	1.943		1.217
Citation Sum:		82.982	208.223	152.122	263.268	263.467	341.508	258.526	412%







UNIVERSITY		CITATIONS 2016 - 2021							
(Serbia)		2016	2017	2018	2019	2020	2021	Diff. 2016 - 2021	
University of Belgrade	Citations	34.502	39.5 <mark>1</mark> 2	np	230.401	351.130	435.2 <mark>1</mark> 6	400.714	1261%
	Rank	1.028	1.086	np	732	597	586		442
University of Novi Sad	Citations	16.503	20.284	25.531	90.295	136. <mark>4</mark> 39	171.779	155.276	1041%
	Rank	1.494	1.581	1.628	1.219	944	<mark>9</mark> 37		557
University of Niš	Citations	10.063	15.195	18.547	58.065	77.494	99.604	89.541	<mark>990%</mark>
	Rank	1.842	1.824	1.951	1.490	1.213	1.210		632
University of	Citations	8.664	13.491	18.475	3 <mark>7.9</mark> 98	38.333	58.201	49.537	<mark>672%</mark>
Kragujevac	Rank	1.953	1.946	1.957	1.786	1.579	1.496		457
Citation Sum:		69.732	88.482	62.553	416.759	603.396	764.800	695.068	1097%

Tabela Web-8: Srbske univerze z največ citati v letih 2016 do 2021





		CITATIONS 2016 - 2021						
Country	2016	2017	2018	2019	2020	2021	Diff. 2016 - 2021	
USA	4.423.722	5.190.762	5.042.419	25.508.438	38.870.945	43.855.707	39.431.985	991%
Austria	551.226	687.028	819.906	2.711.303	3.186.742	3.841.408	3.290.182	697%
Slovenia	128.573	151.615	168.971	464.853	578.051	712.745	584.172	554%
Croatia	82.982	208.223	152.122	263.268	263.467	341.508	258.526	412%
Serbia	69.732	88.482	62.553	416.759	603.396	764.800	695.068	1097%
Citation S	Gum: 5.256.235	6.326.110	6.245.971	29.364.621	43.502.601	49.516.168	44.259.933	942%









Vir: http://www.webometrics.info/en/transparent

Priloga Web-1: Opis metodologije izračunu uvrstitev univerz – Webometrics, julija 2021

Vir: http://www.webometrics.info/en/current_edition

New edition: July 2021

Second edition of 2021: Web data collected during July 2021 (the 18th year!)

The **January edition** (2021.2.0) is built with the indicators obtained during this month in order to maintain the freshness of the data of the most current and updated Ranking of Universities.

This text is the most updated info about the ranking's methodology. It always supersedes the contents provided in the general Methodology. It is also relevant the info provided in the Notes section.

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We warmly thank information about BAD PRACTICES, but we do not discuss specific ranks or comment on comparative results with other HEIs

We devoted time for preparing this site contents explaining the ranking and its methodology. Please, as a courtesy, READ our texts before asking trivial questions already answered in this website.

Info provided here supersedes the contents provided in Methodology

Please, take into account that the following information:

- Spanish edition is no longer updated. Please refer to the English version.

- Exclusion of universities is reserved for diploma-mills, fake or doubtful institutions. Our decisions regarding not inclusion are final and we do not make any email exchange about these issues. However the absence of an institution could be due to an error, so please send to us information about the gaps or mistakes.

- Universities without full 24/7 webservers availability are excluded. Our criteria are not to rank those universities failing to answer our ping requests from our facilities to their servers during two consecutive month requests.

- As previously informed, we also changed our policy regarding the universities with **two or more central web domains**, a bad practice that it is going to be even more penalized than before. Until now, all the main web domains of the university were ranked, but only the one with the better web indicators was published, even if this was the old or the not-preferred one in the central homepage. This procedure is still applied when both domains maintain their independence, but if the old domain redirects to the new one, this will be the one ranked and published. As expected, this is having strong (negative) impact on a few universities.

Changes in the calculation of indicators

Published figures are **RANKS** (lower is better), intended for showing individual performances, but they are not the values used in the calculations. Due to technical issues several key changes (marked in red) have been done, so the following tablae describes the current methodology:

INDICATORS	MEANING	METHODOLOGY	SOURCE	WEIGHT
PRESENCE		This indicator has been discontinued		
VISIBILITY	Web contents Impact	Number of external networks (subnets) linking to the institution's webpages (normalized and then the maximum value is chosen)	Ahrefs Majestic	50%
TRANSPARENCY (or OPENNESS)	Top cited researchers	Number of citations from Top 210 authors (excl. top 20 outliers) See <u>Transparent Ranking</u> for additional info, specially the reasons for exclusion	Google Scholar Profiles	10%
EXCELLENCE (or SCHOLAR)	Top cited papers	Number of papers amongst the top 10% most cited in each one of the all 27 disciplines of the full database Data for the five year period: 2015-2019	Scimago	40%

PLEASE READ: A few practical facts about the Ranking

Since 2004, the Ranking Web (or Webometrics Ranking) is published twice a year (data is collected during the first weeks of January and July for being public at the end of both months), covering more than **31 000 Higher Education Institutions** worldwide. We intend to motivate both institutions and scholars to have a web presence that reflect accurately their activities. If the web performance of an institution is below the expected position according to their academic excellence, university authorities should reconsider their web, open access and transparency policy, promoting substantial increases of the volume and quality of their electronic publications.

Data is collected between 1 and 20 of January or July, depending of the edition. Each variable is obtained at least two times during that period and the maximum value is chosen for discarding mistakes or errors. Volatility of search engines is very high, so figures can be different and not easily replicated if the search is performed days later. Google info is very geographically biased, so for our purposes the data are collected using the google.com mirror domain, English as language of the interface and Madrid (Spain) as location.

Final publication is done about the END of January or July, usually not before the 28th. We reserve the right to correct minor errors, mainly those related to the names of institutions, but also specific problems with the data. As a general rule we do not discuss any figure or provide the raw values supporting specific ranks.

Bad practices

The Webometrics Rank of a university is strongly linked to the **volume and quality of the contents** it publishes on the Web.

During the last years we discovered and fight unethical practices intending to manipulate (improving) the ranks of certain universities. In many cases these bad practices are so serious that **local authorities** should be called, so we decided not to act unilaterally regarding these activities. Results for Presence and Visibility are showed AS THEY ARE COLLECTED and if you suspect any wrongdoing, please contact with the **university head**, **local or national authorities and/or journalists**.

Additional exclusion criteria

A few institutions, mostly religious affiliated "Colleges" in Philippines and Latin America are publishing web portals that cover all their education activities, including those from their Schools (Basic Education) and High Schools (Intermediate Education). It will be unfair to include in the Ranking these institutions for comparative purposes, even although most of the web contents were related to their Higher Education departments. We strongly advice these organizations to segregate with an independent domain their university-level activities if they wish to be included in future editions.

Priloga Web-2: Opis metodologije

Vir: http://www.webometrics.info/en/Methodology

Methodology

Important info. Read this first:

* The **Ranking Web** is not a ranking of the websites of Universities, it is a Ranking of Universities. It uses both webometric (all missions) and bibliometric (research mission) indicators

* The primary objective of the **Ranking Web** is to promote Open Access to the knowledge generated by the University. Best strategy to improve your rank is to increase quantity and quality of your webcontents

* **Ranking Web** started in 2004 (current is the 18th year of publication) with the aim of offer full coverage of Higher Education Institutons whatever the country or discipline involve. Currently we ranked 31 000 HEIs from more than 200 countries

* Editors of the **Ranking Web** are scientists working at one world-class public research institution with long experience in metrics-guided evaluation

* The **Ranking Web** or **Webometrics** is the largest academic ranking of Higher Education Institutions offering every six months an independent, objective, free, open scientific exercise for providing reliable, multidimensional, updated and useful information about the performance of universities from all over the world

* It follows the general introduction to the ranking methodology. However, this is a research project and we change the methodology according to new findings or the availability of sources. If you find discrepancies, please refer to the most updated info that is usually included in the <u>introduction to each new edition</u>.

History

The **Cybermetrics Lab** has been developing quantitative studies on the academic web since the mid-nineties. A first indicator was presented during the EASST/4S conference in Bielefeld (1996) and the collection of web data from European universities started in 1999 supported by the EU funded project EICSTES. These efforts are a follow-up of our scientometric research started in 1994 that has been presented in the conferences of the <u>International Society for Scientometrics and Informetrics</u> (ISSI, 1995-2011) and the International Conferences on Science and Technology Indicators (<u>STI-ENID</u>, 1996-2012) and published in high impact journals (Journal of Informetrics, Journal of the American Society for Information Science and Technology, Scientometrics, Journal of Information Science, Information Processing & Management, Research Evaluation and others). In 1997 we started the edition of an all-electronic open access peer-reviewed journal, <u>Cybermetrics</u>, devoted to the publication of webometrics-related papers.

In 2003 after the publication of the Shanghai Jiatong University breakthrough ranking, the <u>Academic Ranking of World Universities</u> (ARWU), we decided to adopt the main innovations proposed by Liu and his team. The ranking will be built from publicly available web data, combining the variables into a composite indicator, and with a true global coverage. The first edition was published in 2004, it appears twice per year since 2006 and after 2008 the portal also includes webometrics rankings for research centers, hospitals, repositories and business schools.

Objectives and motivation

The original aim of the Ranking is to promote academic web presence, supporting the **Open Access initiatives** for increasing significantly the transfer of scientific and cultural knowledge generated by the universities to the whole Society. In order to achieve this objective, the publication of rankings is one of the most powerful and successful tools for starting and consolidating the processes of change in the academia, increasing the scholars' commitment and setting up badly needed long term strategies

The objective **is not to evaluate websites, their design or usability or the popularity of their contents according to the number of visits or visitors**. Web indicators are considered as proxies in the correct, comprehensive, deep evaluation of the university global performance, taking into account its activities and outputs and their relevance and impact.

At the end a reliable rank is only possible if the web presence is a trustworthy mirror of the university. In the second decade of the 21st century the Web is key for the future of all the university missions, as it is already the most important scholarly communication tool, the future channel for the off-campus distance learning, the open forum for the community engagement and the universal showcase for attracting talent, funding and resources.

Philosophy and justification

Webometrics only publish a **unique** Ranking of Universities in every edition. The combination of indicators is the result of a careful investigation and it is not open to individual choosing by users without enough knowledge or expertise in this field. Other publishers provide series of very different rankings using exactly the same data in different fashions that is completely useless and very confusing.

Webometrics is a ranking of **all** the universities of the world, not only a few hundred institutions from the developed world. Of course, "World-class" universities usually are not small or very specialized institutions.

Webometrics is continuously researching for improving the ranking, **changing or evolving the indicators and the weighting model** to provide a better classification. It is a shame that a few rankings maintain stability between editions without correcting errors or tuning up indicators. Rankings backed by a for-profit company exploiting rank-related business or with strong political links reflected in individual ranks should be checked with care.

Research only (bibliometrics) based rankings are biased against *technologies, computer science, social sciences and humanities,* disciplines that usually amounts for more than half of the scholars and students in a standard comprehensive university. Webometrics also measure, in an indirect way, other missions like teaching or the so-called third mission, considering not only the scientific impact of the university activities, but also the economic relevance of the technology transfer to industry, the community engagement (social, cultural, environmental roles) and even the political influence.

Webometrics uses **link analysis** for quality evaluation as it is a far more powerful tool than citation analysis or global surveys. In the first case, bibliometrics only counts formal recognition between peers, while links not only includes bibliographic citations but also third parties involvement with university activities. Surveys are not a suitable tool for World Rankings as there is not even a single individual with a deep (several semesters per institution), multi-institutional (several dozen), multidisciplinary (hard sciences, biomedicine, social sciences, technologies) experience in a representative sample (different continents) of universities worldwide.

Research output is also key topic for Webometrics, but including not only formal (ejournals, repositories) publications but also informal scholarly communication. Web publication is cheaper, maintaining the high standards of quality of peer review processes. It could also reach much larger potential audiences, offering access to scientific knowledge to researchers and institutions located in developing countries and also to third parties (economic, industrial, political or cultural stakeholders) in their local community.

We intend to motivate both institutions and scholars to have a web presence that reflect accurately their activities. If the web performance of an institution is below the expected position according to their academic excellence, university authorities should reconsider their web policy, promoting substantial increases of the volume and quality of their electronic publications.

Candidate students should use additional criteria if they are trying to choose university. Webometrics ranking correlates well with quality of education provided and academic prestige, but other non-academic variables need to be taken into account.



Composite indicators: Design and Weighting of Indicators

Probably one of the major contributions of the Shanghai Ranking was to introduce a **composite indicator**, combining with a weighting system a series of indicators. The composite indicator can be designed with different sets of variables and weightings according to the developer's needs and models.

Webometrics uses an "a-priori" scientific model for building the composite indicator. Other rankings choose arbitrary weights for strongly dependent variables and even combine raw values with ratios. None of them follow a logical ratio between activity related and impact related variables, i.e. each group representing 50% of the total weighting. Referring to the individual variables, some of them have values larger than zero for only a few universities and others segregate universities according to differences so small that they are even lower than their error rates.

Prior to combination the values should be normalized, but the practice of using percentages is mostly incorrect due to the power law distribution of the data.

Webometrics log-normalize the variables before combining according to a ratio 1:1 between activity/presence and visibility/impact groups of indicators.

Advantages and shortcomings

Coverage. Webometrics is the largest ranking by number of HEIs analyzed, but there is no classification of the different institutional types, so research-intensive universities are listed together with community colleges or theological seminaries. However the rank segregates all of them so it is not difficult to build sub-rankings for those interested.

University missions. The direct measurement of teaching mission is virtually unfeasible and those evaluations based on surveys (subjective), ratios of students/scholars (data unreliable and results not segregating) or employment results (with many variables involved other than quality of teaching) should be avoided. Webometrics rank indirectly this mission using web presence as an indicator of the commitment of the scholars with their students. It is not perfect but the future of this mission is clearly in the web arena and any institution or individual not realizing that is losing ground very fast.

Big numbers. Quality of the data does not only depend of the source used, but also of the numbers involved. For example, the number of universities with more than one Nobel Prize is probably lower than 200 (including all of those granted since 1900) that makes very difficult to rank them correctly. The same applies to citation data, the most powerful bibliometric tool that is providing figures in the order of thousands and tens of thousands. The link data offer far larger big number, usually two or even three orders of magnitude larger. Certainly the web indicators are noisier but statistically they are better suited for uncovering patterns and discriminating larger number of institutions.

Size-dependent. There is no debate about this issue: The most popular rankings, including Webometrics, are size dependent, although size does not refer to number of scholars or students (Harvard or especially MIT are not large in that sense) but probably to resources (current funding, past funding reflected in buildings, laboratories or libraries). But this criticism is not correct as really none of the rankings are really measuring efficiency but global performance. The economic wealth of the nations can be measured in terms of GDP (USA, China, Japan) or in terms of GDP per capita (Luxembourg, Emirates, Norway), both indicators are correct but their objectives are completely different.

Bad naming practices. University managers are still fighting for convincing their authors to assign the correct affiliations in the scientific publications. Situation is not far better in the Web with several hundred institutions having more than one central webdomain, preserving active old domains, using alternative domains for international (English) contents or sharing domains with third parties. Even among those universities with only one domain, many of them change the domain frequently, sometimes without any apparent good reason for doing that. A strange relatively common situation is when those changes are for transferring a national top level domain to an ".edu" domain (that usually refers to a USA university!) even when the country has a clearly defined academic subdomain (edu.pl, edu.ua, ac.kr). These changes and, especially the preservation along the time of several domains, penalizes very severely in Webometrics ranking. But of course it is also a very misleading practice that decreases the web visibility of the universities. Probably it has not so strong effect on local populations, but it is really confusing for the global audiences. *Fake and non-accredited universities.* We try to do the best for not including fake institutions, checking especially online, international and foreign branches if they have independent web domain or subdomain. Any suggestion on these issues is greatly welcomed.

Please, take into account that the following information:

- Spanish edition is no longer updated. Please refer to the English version.

- Exclusion of universities is reserved for diploma-mills, fake or doubtful institutions. Our decisions regarding not inclusion are final and we do not make any email exchange about these issues. However the absence of an institution could be due to an error, so please send to us information about the gaps or mistakes.

- Universities without full 24/7 webservers availability are excluded. Our criteria are not to rank those universities failing to answer our ping requests from our facilities to their servers during two consecutive month requests.

- As previously informed, we also changed our policy regarding the universities with two or more central web domains, a bad practice that it is going to be even more penalized than before. Until now, all the main web domains of the university were ranked, but only the one with the better web indicators was published, even if this was the old or the notpreferred one in the central homepage. This procedure is still applied when both domains maintain their independence, but if the old domain redirects to the new one, this will be the one ranked and published. As expected, this is having strong (negative) impact on a few universities.

Current calculation of indicators

Published figures are **RANKS** (lower is better), intended for showing individual performances, but they are not the values used in the calculations. Due to technical issues several key changes (marked in red) have been done, so the following tablae describes the current methodology:

INDICATORS	MEANING	METHODOLOGY	SOURCE	WEIGHT
PRESENCE	Public knowledge shared	DISCONTINUED		
VISIBILITY	Web contents Impact	Number of external networks (subnets) linking to the institution's webpages (normalized and then the maximum value is chosen)	Ahrefs Majestic	50%
TRANSPARENCY (or OPENNESS)	Top cited researchers	Number of citations from Top 210 authors (excl. top 20 outliers) See <u>Transparent Ranking</u> for additional info	Google Scholar Profiles	10%
EXCELLENCE (or SCHOLAR)	Top cited papers	Number of papers amongst the top 10% most cited in each one of the all 27 disciplines of the full database Data for the five year period: 2015-2019	Scimago	40%

A few practical facts about the Ranking

Since 2004, the Ranking Web (or Webometrics Ranking) is published twice a year (data is collected during the first weeks of January and July for being public at the end of both months), covering more than **30 000 Higher Education Institutions** worldwide. We intend to motivate both institutions and scholars to have a web presence that reflect accurately their activities. If the web performance of an institution is below the expected position according to their academic excellence, university authorities should reconsider their web, open access and transparency policy, promoting substantial increases of the volume and quality of their electronic publications.

Data is collected between 1 and 20 of January or July, depending of the edition. Each variable is obtained at least two times during that period and the maximum value is chosen for discarding mistakes or errors. Volatility of search engines is very high, so figures can be different and not easily replicated if the search is performed days later. Google info is very geographically biased, so for our purposes the data are collected using the google.com mirror domain, English as language of the interface and Madrid (Spain) as location.

Final publication is done about the END of January or July, usually not before the 28th. We reserve the right to correct minor errors, mainly those related to the names of institutions, but also specific problems with the data. As a general rule we do not discuss any figure or provide the raw values supporting specific ranks.

Bad practices

The Webometrics Rank of a university is strongly linked to the **volume and quality of the contents** it publishes on the Web.

During the last years we discovered and fight unethical practices intending to manipulate (improving) the ranks of certain universities. In many cases these bad practices are so serious that **local authorities** should be called, so we decided not to act unilaterally regarding these activities. Results for Presence and Visibility are showed AS THEY ARE COLLECTED and if you suspect any wrongdoing, please contact with the **university head**, **local or national authorities and/or journalists**.

Additional exclusion criteria

A few institutions, mostly religious affiliated "Colleges" in Philippines and Latin America are publishing web portals that cover all their education activities, including those from their Schools (Basic Education) and High Schools (Intermediate Education). It will be unfair to include in the Ranking these institutions for comparative purposes, even although most of the web contents were related to their Higher Education departments. We strongly advice these organizations to segregate with an independent domain their university-level activities if they wish to be included in future editions.

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Bibliography:

- Aguillo, I. F.; Granadino, B.; Ortega, J. L.; Prieto, J. A. (2006). Scientific research activity and communication measured with cybermetric indicators. *Journal of the American Society for the Information Science and Technology*, 57(10): 1296 - 1302.

- Wouters, P.; Reddy, C. & Aguillo, I. F. (2006). On the visibility of information on the Web: an exploratory experimental approach. **Research Evaluation**, 15(2):107-115.

- Ortega, J L; Aguillo, I.F.; Prieto, JA. (2006). Longitudinal Study of Contents and Elements in the Scientific Web environment. Journal of Information Science, 32(4):344-351.

- Kretschmer, H. & Aguillo, I. F. (2005).New indicators for gender studies in Web networks. **Information Processing & Management**, 41 (6): 1481-1494.

- Aguillo, I. F.; Granadino, B.; Ortega, J.L. & Prieto, J.A. (2005). What the Internet says about Science. **The Scientist**, 19(14):10, Jul. 18, 2005.

- Kretschmer, H. & Aguillo, I. F. (2004). Visibility of collaboration on the Web. *Scientometrics*, 61(3): 405-426.

- Cothey V, Aguillo IF & Arroyo N (2006). Operationalising "Websites": lexically, semantically or topologically?. **Cybermetrics**, 10(1): Paper 4. <u>http://cybermetrics.cindoc.csic.es/articles/v10i1p4.pdf</u>

Priloga Web-3: Opis metodologije Top Universities by Citations in Top Google Scholar profiles

https://www.webometrics.info/en/transparent

TRANSPARENT RANKING: Top Universities by Citations in Top Google Scholar profiles

Twelfth Edition (July 2021 version 12.0.1 beta).

Following the request of many universities, we decided not to use **temporally** the **Google Scholar Citations (GSC) institutional profiles** in this edition. GS is still working for extending their coverage, but unfortunately their resources are limited and there is no final date for finishing the task. The number of profiles is over 5000, but it is far for covering our full directory. We are still committed to the use that key source, but in the meantime we are collecting citations for the lists obtained from filtering GSC profiles by the (main and only the main) institutional web domains used in the Ranking Web (email domains in GSC).

PLEASE READ THIS INFORMATION FIRST

The data, as in previous editions, is still in BETA, but when cleaned it will be used as the **Transparent (Openness) indicator** of the next edition of the Ranking Web of Universities scheduled for the END OF JULY 2021. There are a few methodological changes that are very relevant:

1. We strongly advice to use **normalized (official) name** of the university in the affiliation and the **INSTITUTIONAL email address**. We are using the domain of the email addresses for filtering the profiles and data in GS Citations. When institutional profiles get updated and enlarged we will use them instead, so it is important to standardize names and affiliations for the future.

2. Citations from the **top 210 public profiles** of each university are collected. This number of profiles is for allowing **size independent** comparisons. **The top twenty (20) profiles of the list is EXCLUDED** for improving representativeness by removing outliers. For the rest of the top profiles, the number of citations are added and the institutions are ranked in descending order of this indicator.

3. IMPORTANT: **Non individual profiles** (journals, departments, groups, conferences) included in the top 210 results are penalized with the **EXCLUSION of the whole institution** (citation count equals to zero).

4. BAD PRACTICES. If multiple profiles of **authors not belonging to the University** are added intentionally to increase its rank, **the institution will be EXCLUDED** of the ranking. We compile data from more than 990 000 GSC profiles, some of them are incorrect (unedited, incomplete or erroneous), but it is almost impossible for us to check all of them.

5. The figures **are valid only at the time of collection** (around **June 20-24, 2021**). We don't comment on the numbers or absences. This version consist only of Top entries (**citations>1000**), about 4 200 institutions, but we will use non-zero values for about 2 500 additional institutions.

6. A few universities have two main web domains, but only the best global ranked is included in the main ranking

To set up an personal profile in Google Scholar Citations database is voluntary, but once it is made public the responsibility for info correctness belongs to the author. GSC automatically updates the profiles, that although very practical sometimes it adds non-pertinent records and citations to the profile. Authors should be aware of these issues and clean their profiles periodically. Also institutions should monitor their members profiles for intended (or unintended) fake, incorrect or duplicate records. This is key for the ranking as any institution with these problems can be excluded from future editions of the ranking. **Please, contact directly with Google Scholar for any aspect related with its database or profiles.**

Please contact <u>isidro.aguillo</u> regarding errors or corrections before the publication of the main Ranking **Priloga Web-4**: Opis metodologije Top Universities by Citations in Top Google Scholar profiles

Vir: http://www.webometrics.info/en/Best_Practices

Decalogue of good practices in institutional web positioning

The following recommendations are intended to help Universities and R&D institutions worldwide to have an adequate web presence. Institutional websites should accurately represent their resources, activities and global performance, providing visitors with a clear vision of the institution. We encourage institutions to engage in medium and long term web presence projects that give priority to the publication of large volume of quality contents under Open Access type models.

We **disapprove strongly** the use of abusive positioning techniques that can generate misleading indicators. If we suspect an institution of engaging in such activities, we will give a warning, and then the involved institution will be expelled from the Ranking.

1. URL naming

Each institution should choose a unique institutional domain that can be used by all the websites of the institution. We sugest well known acronyms and if it is possible full words describing the city, the state or other descriptive items.

It is very important to avoid changing the institutional domain as it can generate confusion and it has a devastating effect on the visibility values. The alternative or mirror domains should be disregarded even when they redirect to the preferred one.

Today it is very easy and cheap to rent a service for hosting your webpages. If you are unable for technical, political or economic reasons to build your own web service we suggest contacting foreign providers that can also guarantee worldwide access.

Reliable and independent information about web hosting services.

2. Contents: Create

A large web presence is made possible only with the efforts of a large group of authors. The best way to do this is to encourage and support a large number of your scholars, researchers or graduate students as potential authors.

A distributed system of authoring can be operative at several levels:

Central organisation can be responsible for the design guidelines and institutional information

Libraries, documentation centres and similar services can be responsible for large databases that includes bibliographic ones, but also large repositories (thesis, pre-prints, and reports)

Individual persons or teams should maintain their own websites, enriching them with self archiving practices.

Hosting external resources can be interesting for third parties and increase the visibility: Conference websites, software repositories, scientific societies and their publications, especially electronic journals.

3. Contents: Convert

Important resources are available in non electronic format that can be converted to web pages easily. Most of the universities have a long record of activities that can be published in historical web sites.

Other resources are also candidate for conversion, including past activities, reports or pictures collections.

4. Interlinking

The Web is a hypertextual corpus with links connecting pages. If your contents are not known (bad design, limited information, or minority language), there are not enough pages or they have low quality, the site probably will receive very few links from other sites.

Measuring and classifying the links from others can be insightful. You should expect links from your "natural" partners: Institutions from your locality or region, web directories from similar organisations, portals covering your topics, colleagues or partners personal pages. Your pages should make an impact in your common language community.

Check for the orphaned pages, i.e. pages not linked from another.

5. Language, especially English

The Web audience is truly global, so you should not think locally. Language versions, especially in English, are mandatory not only for the main pages, but for selected sections and specially from scientific documents.

6. Rich and media files

Although HTML is the standard format of web pages, sometimes it is better to use rich file formats like Adobe Acrobat pdf or MS Word doc as they allow a better distribution of documents. PostScript is a popular format in certain areas (physics, engineering, mathematics) but it can be difficult to open, so it is recommended to provide an alternative version in pdf format.

Bandwidth is growing exponentially, so it is a good investment to archive all media materials produced in web repositories. Collections of videos, interviews, presentations, animated graphs, and even digital pictures could be very useful in the long term.

7. Search engine friendly designs

Avoid cumbersome navigation menus based on Flash, Java or JavaScript that can block the robot access.

Deep nested directories or complex interlinking can block robots too.

Databases and even highly dynamic pages can be invisible for some search engines, so use directories or static pages instead or as an option.

There are several large <u>collections of tricks and advices</u> that can be useful.

8. Popularity and statistics

Number of visits is important, but it as much as important to monitor their origin, distribution and the causes why they reach your web sites. Most of the current log analysers offer a great diversity of tables and graphs showing relevant demographic and geographic data, but make sure there is an option to show the referrers, the web pages from which the visit arrives or the search term or phrase used if the visit came from a search engine. Most popular pages or directories are also relevant.

Consider Google Analytics

9. Archiving and persistence

Maintainin a copy of old or outdated material in the site should be mandatory. Sometimes relevant information is lost when the site is redesigned or simply updated and there is no way to recover easily the vanished pages.

10. Standards for enriching sites

The use of meaningful titles and descriptive metatags can increase the visibility of the pages. There are some standards like Dublin Core that can be used to add authoring info, keywords and other data about the web sites.

Check the <u>Dublin Core</u> portal

Priloga Web-5: Dostop do prejšnjih verzij

Vir: http://webometrics.info/en/Previous_editions

Previous editions

If you are interested in checking the previous editions we recommend to use "The Internet Archive". Please, take into account that the methodology has **evolved** substantially during the last decade, so use caution when comparing results from different editions.

It should be noted that the aim of the ranking is to promote Open Access, not to classify websites, so your priority should be to involve **everybody** in your organization in the generation and publication of web contents and not on the insane task of monitoring the ranks.

This is probably the only **useful** ranking that allows feasible strategies to be implemented and having impact without wild mergings, wasting huge amounts of funds or expecting Nobel miracles.